

Behavioral Monitoring and Evaluation for the Delivery of Interactive Cognitive Behavioral Therapy (B-MEDIC), Phase I

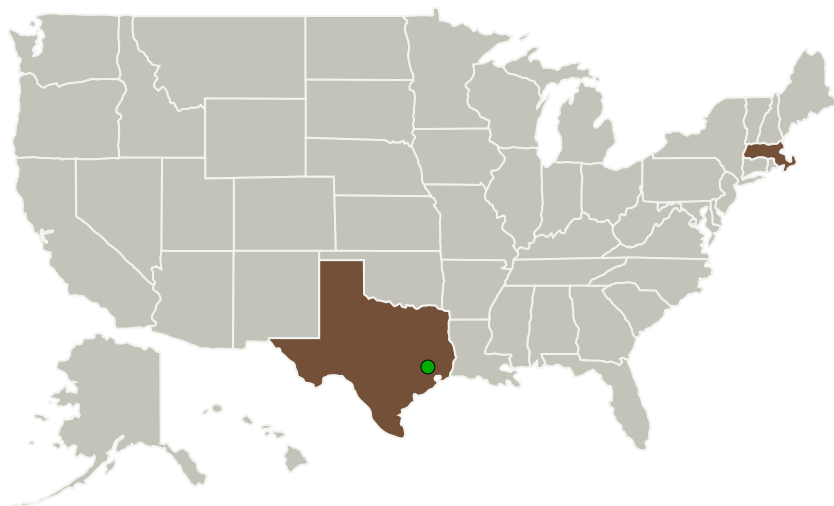
Completed Technology Project (2011 - 2011)



Project Introduction

Crew behavioral health and performance are of high importance, especially for long duration exploration missions. Early detection of stress and effective options for restoration and enhancement of behavioral health are imperative for accomplishment of mission objectives and for maintaining a productive spaceflight environment. To address the behavioral health issues during exploration missions, the NASA Behavioral Health and Performance Program Element (BHP) is looking for a non-invasive technology that would unobtrusively, and with minimal crew time and effort: monitor physiological markers of stress; offer countermeasures for maintenance and restoration of behavioral health; and identify methods to prevent decrements in behavioral health. The primary goal of this project is the development of a tool to provide Behavioral Monitoring and Evaluation for the Delivery of Interactive Cognitive behavioral therapy (B-MEDIC). During Phase I we will provide an analysis of measures and technologies for physiologically monitoring, assessing and treating stress; and provide requirements for the technological enhancements necessary to produce B-MEDIC. By the end of Phase II, our multi-disciplinary team proposes to develop a functioning prototype of B-MEDIC to address the following gaps outlined in the BHP Integrated Research Plan (July 2010): BMED1, BMED2, and BMED6. (Phase I TRL: Beginning 1, End 3)

Primary U.S. Work Locations and Key Partners



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Organizations Performing Work	Role	Type	Location
Aptima, Inc.	Lead Organization	Industry	Woburn, Massachusetts
● Johnson Space Center(JSC)	Supporting Organization	NASA Center	Houston, Texas

Primary U.S. Work Locations	
Massachusetts	Texas

Project Transitions

▶ **February 2011:** Project Start

✓ **September 2011:** Closed out

Closeout Documentation:

- Final Summary Chart(<https://techport.nasa.gov/file/138015>)

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

Aptima, Inc.

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

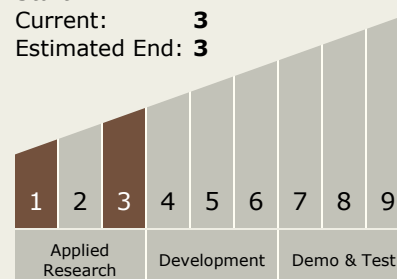
Carlos Torrez

Principal Investigator:

Alexandra Geyer

Technology Maturity (TRL)

Start: **1**
 Current: **3**
 Estimated End: **3**



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Technology Areas

Primary:

- TX06 Human Health, Life Support, and Habitation Systems
 - └ TX06.3 Human Health and Performance
 - └ TX06.3.3 Behavioral Health and Performance

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System